NPE-G2 Support for the show environment Command

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The output of the **show environment** command has been modified to support the NPE-G2 Network Processing Engine on the Cisco 7200 VXR in Cisco IOS Release 12.4(4)XD. No other changes to the Cisco IOS software were made.

Finding Feature Information in This Module

Your Cisco IOS software release may not support all of the features documented in this module. To reach links to specific feature documentation in this module and to see a list of the releases in which each feature is supported, use the "Feature Information for NPE-G2 Support for the show environment Command" section on page 28.

Finding Support Information for Platforms and Cisco IOS and Catalyst OS Software Images

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Contents

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Additional References

The following sections provide references related to the *NPE-G2 Support for the show environment Command* feature.

Related Documents

Related Topic	Document Title
show environment command, Cisco IOS Release12.4T (without NPE-G2 output changes)	*Cisco IOS Configuration Fundamentals Command Reference, Release 12.4T*

Standards

Standard	Title
No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature.	—

MIBs

MIB	MIBs Link
No new or modified MIBs are supported by this feature, and support for existing MIBs has not been modified by this feature.	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFC	Title
No new or modified RFCs are supported by this feature, and support for existing RFCs has not been modified by this feature.	—

Technical Assistance

Description	Link
The Cisco Technical Support & Documentation website contains thousands of pages of searchable technical content, including links to products, technologies, solutions, technical tips, and tools. Registered Cisco.com users can log in from this page to access even more content.	http://www.cisco.com/techsupport

Command Reference

This section documents the following modified command:

- **show environment**

show environment

To display temperature, voltage, fan, and power supply information on the Cisco 7000 series, Cisco 7200 series, NPE-G2 in Cisco 7200 VXR routers, Cisco 7304 routers, Cisco 7500 series routers, Cisco 3600 series routers, Cisco AS5300 series access servers, and Cisco 12000 series Gigabit Switch Routers (GSRs), use the **show environment** command in user EXEC or privileged EXEC mode.

show environment [**alarms** | **all** | **fans** | **hardware** | **last** | **leds** | **power-supply** | **table** | **temperature** | **voltages**]

On the Cisco 7000 Series, Cisco 7200 Series, Cisco 7304, and Cisco 7500 Series Routers

show environment [**all** | **last** | **table**]

Syntax Description

alarms	(Optional) Displays the alarm contact information.
all	(Optional) Displays a detailed listing of all environmental monitor parameters (for example, the power supplies, temperature readings, voltage readings, and blower speeds). This is the default.
fans	(Optional) Displays blower and fan information.
hardware	(Optional) Displays hardware-specific information.
last	(Optional) Displays information on the last measurement made.
leds	(Optional) Displays the status of the MBus LEDs on the clock and scheduler cards and switch fabric cards.
power-supply	(Optional) Displays power supply voltage and current information. If applicable, displays the status of the redundant power supply.
table	(Optional) Displays the temperature, voltage, and blower ranges and thresholds. On the Cisco 7200 series, including the NPE-G2 in the Cisco 7200 VXR, the Cisco 7304 routers, and the Cisco 7500 series routers, the **table** keyword displays only the temperature and voltage thresholds.
temperature	(Optional) Displays temperature information.
voltages	(Optional) Displays voltage information.

Defaults

If no options are specified, the default is **all**.

Command Modes

User EXEC

Privileged EXEC

Command History

Release	Modification
10.0	This command was introduced.
11.2 GS	The **alarms**, **fans**, **hardware**, **leds**, **power-supply**, **table, temperature**, and **voltages** keywords were added for the Cisco 12000 series GSRs.

Release	Modification
11.3(6)AA	This command was expanded to monitor the RPS and board temperature for the Cisco AS5300 platform, Cisco 3600 Series routers, Cisco 7200 series routers, and the Cisco 12000 series GSRs.
12.2(20)S	This command was integrated into Cisco IOS Release 12.2(20)S.
12.2(20)S2	This command was integrated into Cisco IOS Release 12.2(20)S to support MSCs and SPAs on the Cisco 7304 router using the **all**, **last**, and **table** keywords.
12.4(4)XD	This command was integrated into Cisco IOS Release 12.4(4)XD to support the NPE-G2 on the Cisco 7200 VXR using the **all**, **last**, and **table** keywords. Command output was modified for the NPE-G2.

Usage Guidelines

The availability of keywords will depend on your system and platform. The command does not support SPAs on the Cisco 7200 series and on the NPE-G2 in the Cisco 7200 VXR routers.

A routine runs once a minute that reads environmental measurements from sensors and stores the output into a buffer. For shared port adapters (SPAs), the temperature and voltage sensors are read every few seconds to get environmental data. The environmental buffer is displayed on the console when you use the **show environment** command.

If a measurement exceeds desired margins, but has not exceeded fatal margins, a warning message is printed to the system console. The system software queries the sensors for measurements once a minute, but warnings for a given test point are printed at most once every hour for sensor readings in the warning range and once every 5 minutes for sensor readings in the critical range. If a measurement is out of line within these time segments, an automatic warning message appears on the console. As noted, you can query the environmental status with the **show environment** command at any time to determine whether a measurement is at the warning or critical tolerance.

A SPA is shut down when any of the SPA environment readings exceed the shutdown threshold.

If a shutdown occurs because of detection of fatal environmental margins, the last measured value from each sensor is stored in internal nonvolatile memory.

For environmental specifications, refer to the hardware installation and configuration publication for your individual chassis.

For network processor engines (NPEs), network services engines (NSEs), line cards, and modular services cards (MSCs), environmental information is recorded in the CISCO-ENVMON-MIB. SPAs are not supported by the CISCO-ENVMON-MIB. In Cisco IOS Release 12.2(20)S2 and later, the CISCO-ENTITY-SENSOR-MIB supports environmental information for SPAs, as well as NPEs, NSEs, line cards, and MSCs.

If the Cisco 12000 series GSR exceeds environmental conditions, a message similar to the following is displayed on the console:

```
%GSR_ENV-2-WARNING: Slot 3 Hot Sensor Temperature exceeds 40 deg C;
Check cooling systems
```

Note Blower temperatures that exceed environmental conditions do not generate a warning message.

You can also enable Simple Network Management Protocol (SNMP) notifications (traps or informs) to alert a network management system (NMS) when environmental thresholds are reached using the **snmp-server enable traps envmon** and **snmp-server host** global configuration commands.

Whenever Cisco IOS software detects a failure or recovery event from the DRPS unit, it sends an SNMP trap to the configured SNMP server. Unlike console messages, only one SNMP trap is sent when the failure event is first detected. Another trap is sent when the recovery is detected.

Cisco AS5300 DRPS software reuses the MIB attributes and traps defined in CISCO-ENVMON-MIB and CISCO-ACCESS-ENVMON-MIB. CISCO-ENVMON-MIB is supported by all Cisco routers with RPS units, and CISCO-ACCESS-ENVMON-MIB is supported by the Cisco 3600 series routers.

A power supply trap defined in CISCO-ENVMON-MIB is sent when a failure is detected and when a failure recovery occurs for the following events: input voltage fail, DC output voltage fail, thermal fail, and multiple failure events.

A fan failure trap defined in CISCO-ENVMON-MIB is sent when a fan failure or recovery event is detected by Cisco IOS software.

A temperature trap defined in CISCO-ACCESS-ENVMON-MIB is sent when a board over-temperature condition is detected by Cisco IOS software.

CISCO-ACCESS-ENVMON-MIB also defines an over-voltage trap. A similar trap is defined in CISCO-ENVMON-MIB, but it requires the ciscoEnvMonVoltageStatusValue in varbinds. This value indicates the current value of the voltage in the RPS. With Cisco AS5300 RPS units, the current voltage value is not sent to the motherboard.

CISCO-ENVMON-MIB is extended to add a new enumerated value, internalRedundant(5), for MIB attribute ciscoEnvMonSupplySource. This is used to identify a RPS unit.

Examples

In the following example, the typical **show environment** display is shown when no warning conditions are in the system for the Cisco 7000 series and Cisco 7200 series routers. This information may vary slightly depending on the platform you are using. The date and time of the query are displayed, along with the data refresh information and a message indicating that there are no warning conditions.

```
Router> show environment

Environmental Statistics
  Environmental status as of 13:17:39 UTC Thu Jun 6 1996
  Data is 7 second(s) old, refresh in 53 second(s)

  All Environmental Measurements are within specifications
```

Table 1 describes the significant fields shown in the display.

Table 1 show environment Field Descriptions

Field	Description
Environmental status as of...	Current date and time.
Data is..., refresh in...	Environmental measurements are output into a buffer every 60 seconds, unless other higher-priority processes are running.
Status message	If environmental measurements are not within specification, warning messages are displayed.

NPE-G2 in Cisco 7200 VXR Routers Examples

In the following example, additional temperature and voltage readings for the NPE-G2 in the Cisco 7200 VXR router are displayed by the **show environment all** command. Power supplies 1 and 2 are on, and all monitored variables are within the normal operating range.

```
Router_npe-g2# show environment all
Power Supplies:
Power Supply 1 is Zytek AC Power Supply. Unit is on.
Power Supply 2 is Zytek AC Power Supply. Unit is on.
Temperature readings:
NPE Inlet measured at 25C/77F
NPE Outlet measured at 28C/82F
CPU Die measured at 56C/132F            =======> additional temperature reading on NPE-G2
Voltage readings:
+3.30 V measured at +3.32 V             =======> additional voltage reading on NPE-G2
+1.50 V measured at +1.48 V             =======> additional voltage reading on NPE-G2
+2.50 V measured at +2.46 V             =======> additional voltage reading on NPE-G2
+1.80 V measured at +1.75 V             =======> additional voltage reading on NPE-G2
+1.20 V measured at +1.17 V             =======> additional voltage reading on NPE-G2
VDD_CPU measured at +1.28 V             =======> additional voltage reading on NPE-G2
VDD_MEM measured at +2.50 V             =======> additional voltage reading on NPE-G2
VTT measured at +1.25 V                 =======> additional voltage reading on NPE-G2
+3.45 V measured at +3.39 V
-11.95 measured at -11.93 V
+5.15 V measured at +4.96 V
+12.15 V measured at +12.18 V
Envm stats saved 0 time(s) since reload
```

Table 2 show environment all Field Descriptions for NPE-G2 in Cisco 7200 VXR router

Field	Description
Power Supply *x* is present.	Specifies whether the indicated (*x*) power supply slot is populated. If a power supply slot is populated, the manufacturer name and whether it is an AC or DC power supply is displayed.
Unit is ...	Indicates whether the power supply status is on or off.
Temperature readings	Indicates the temperature of air coming in and going out of the NPE Inlet, NPE Outlet, and CPU Die areas.
NPE Inlet measured at 25C/77F	Indicates that the temperature measurements at the inlet area of the chassis is 25C/77F, which is within normal operating range. System shutdown for NPE Inlet is 80C/176F.
NPE Outlet measured at 28C/82F	Indicates that the temperature measurements at the outlet area of the chassis is 28C/82F, which is within normal operating range. System shutdown for NPE Outlet is 84C/183F.
CPU Die measured at 56C/132F	Indicates that the temperature measurement at the CPU Die (internal silicon of the CPU) area of the chassis is 56C/132F, which is within normal operating range. System shutdown for CPU Die is 100C/212F.

Table 2 show environment all Field Descriptions for NPE-G2 in Cisco 7200 VXR router

Field	Description
Voltage readings: +3.30 V measured at +3.32 V +1.50 V measured at +1.48 V	System voltage measurements that indicate the actual measured value for the specified power rail, which is named after the expected target value. For example, the +3.30 V rail, with an expected value of +3.30 V, actually measures at +3.32 V. This is within the target range. For example, the +1.50 V rail, with an expected value of +1.50 V, actually measures at +1.48 V. This is within the target range.
VDD_CPU measured at +1.28 V	Indicates +1.28 V is the measured voltage of the VDD_CPU power rail, which is within normal operating range. The expected value is 1.3 V.
VDD_MEM measured at +2.50 V	Indicates +2.50 V is the measured voltage of the VDD_MEM power rail, which is within normal operating range. The expected value is 2.5 V.
VTT measured at +1.25 V	Indicates +1.25 V is the measured voltage of the VTT power rail, which is within normal operating range. The expected value is 1.25 V.

In the following example, the **show environment last** command displays the previously saved measurements (readings) from the last environmental reading before the router was shut down. The command also displays the reason why the router was shut down, which was "power supply shutdown" in this case.

```
Router_npe-g2# show environment last
NPE Inlet previously measured at 26C/78F
NPE Outlet previously measured at 28C/82F
CPU Die previously measured at 56C/132F
+3.30 V previously measured at +3.32
+1.50 V previously measured at +1.48
+2.50 V previously measured at +2.46
+1.80 V previously measured at +1.75
+1.20 V previously measured at +1.17
VDD_CPU previously measured at +1.28
VDD_MEM previously measured at +2.50
VTT previously measured at +1.25
+3.45 V previously measured at +3.39
-11.95 previously measured at -11.93
+5.15 V previously measured at +4.96
+12.15 V previously measured at +12.18
last shutdown reason - power supply shutdown
Router_npe-g2#
```

Table 3 show environment last Field Descriptions for the Cisco 7200 VXR NPE-G2 Router

Field	Description
NPE Inlet previously measured at 26C/78F	The last measured temperature of the inlet air of the router prior to shutdown.
NPE Outlet previously measured at 28C/82F	The last measured temperature of the outlet air of the router prior to shutdown.

Table 3 show environment last Field Descriptions for the Cisco 7200 VXR NPE-G2 Router

Field	Description
CPU Die previously measured at 56C/132F	The last measured temperature of the CPU Die prior to shutdown.
+3.30 V previously measured at +3.32	The last measured voltage of the 3.30 V power rail prior to shutdown.
VDD_CPU previously measured at +1.28	The last measured voltage of the VDD_CPU power rail prior to shutdown.
VDD_MEM previously measured at +2.50	The last measured voltage of the VDD_MEM power rail prior to shutdown.
VTT previously measured at +1.25	The last measured voltage of the VTT power rail prior to shutdown.
last shutdown reason	Indicates the reason for the shutdown.

In the following example, the **show environment table** command displays threshold levels in a table format of the environmental monitor parameters. It displays the high warning, high critical, and high shutdown temperature thresholds of the NPE inlet, NPE outlet, and CPU Die. It also displays the low and high critical voltage thresholds, and low and high shut down voltage thresholds for the power rails on the NPE-G2 in the Cisco 7200 VXR.

Note The low range temperatures, such as the LowShut, LowCrit, and LowWarn temperature thresholds, are not checked and are not displayed on the NPE-G2. Also the warning voltage thresholds, such as LowWarn and HighWarn, are not checked and are not displayed on the NPE-G2.

```
Router_npe-g2# show environment table
Sample Point LowShut LowCrit LowWarn HighWarn HighCrit HighShut
NPE Inlet                           44C/111F 59C/138F
NPE Outlet                          49C/120F 64C/147F
CPU Die                             75C/167F 85C/185F
System shutdown for NPE Inlet is 80C/176F
System shutdown for NPE Outlet is 84C/183F
System shutdown for CPU Die is 100C/212F
+3.30 V      +2.30   +3.12                  +3.47    +4.29
+1.50 V      +1.05   +1.40                  +1.56    +1.95
+2.50 V      +1.71   +2.34                  +2.61    +3.28
+1.80 V      +1.25   +1.67                  +1.91    +2.34
+1.20 V      +0.82   +1.13                  +1.28    +1.56
VDD_CPU      +0.89   +1.21                  +1.36    +1.71
VDD_MEM      +1.71   +2.34                  +2.61    +3.28
VTT          +0.85   +1.17                  +1.32    +1.64
+3.45 V      +2.38   +3.28                  +3.63    +4.49
-11.95 V     -8.44   -11.56                 -12.84   -15.78
+5.15 V      +3.59   +4.88                  +5.42    +6.71
+12.15 V     +8.55   +11.48                 +12.77   +15.82
```

Table 4 show environment table Field Descriptions for the NPE-G2 in Cisco 7200 VXR Router

Field	Description
Sample Point	This is the area for which temperature or system voltage thresholds are displayed.
LowShut	This is the LowShut voltage threshold. If the voltage value is below the LowShut threshold, the router shuts down. **Note** The LowShut temperature value is not checked and its threshold is not displayed on the NPE-G2.
LowCrit	This is the low critical voltage threshold. If the voltage value is below the LowCrit threshold, a critical message is issued for an out-of-tolerance voltage value. The system continues to operate. However, the system is approaching shutdown. **Note** The LowCrit temperature value is not checked and its threshold is not displayed on the NPE-G2.
LowWarn	The LowWarn temperature threshold and LowWarn voltage threshold are not checked and the threshold information is not displayed on the NPE-G2.
HighWarn	This is the HighWarn temperature threshold. If the temperature reaches the HighWarn threshold, a warning message is issued for an out-of-tolerance temperature value. The system continues to operate, but operator action is recommended to bring the system back to a normal state. **Note** The HighWarn voltage threshold is not checked and its threshold is not displayed on the NPE-G2.
HighCrit	This is the HighCrit temperature or voltage threshold. If the temperature or voltage reaches the HighCrit level, a critical message is issued. The system continues to operate. However, the system is approaching shutdown. **Note** Beware that if the temperature reaches or exceeds the HighShut value, a Shutdown message is issued and the router shuts down.
HighShut	This is the HighShut temperature or voltage threshold. If the temperature or voltage level reaches or exceeds the HighShut value, a Shutdown message is issued and the router shuts down.

Table 4 show environment table Field Descriptions for the NPE-G2 in Cisco 7200 VXR Router

Field	Description
NPE Inlet 44C/111F 59C/138F	These are the HighWarn and HighCrit temperature thresholds, respectively, for the NPE Inlet. If the NPE Inlet temperature value reaches the HighWarn (44C/111F) and HighCrit (59C/138F) levels, warning and critical messages, respectively, are issued. If the value reaches 44C/111F or greater, you receive a warning message indicating HighWarn. The system continues to operate, but operator action is recommended to bring the system back to a normal state. If the value reaches 59C/138F or greater, you receive a critical (HighCrit) message instead, that indicates the system continues to operate, but the system is approaching shutdown. **Note** Beware if the temperature reaches or exceeds 80C/176F, which is the HighShut value, a Shutdown message is issued, and the NPE Inlet area shuts down.
NPE Outlet 49C/120F 64C/147F	These are the HighWarn and HighCrit temperature thresholds, respectively, for the NPE Outlet. If the NPE Outlet temperature value reaches the HighWarn (49C/120F) and HighCrit (64C/147F) levels, warning and critical messages, respectively, are issued. If the value reaches 49C/120F or greater, you receive a warning message indicating HighWarn. The system continues to operate, but operator action is recommended to bring the system back to a normal state. If the value reaches 64C/147F or greater, you receive a critical (HighCrit) message instead, that indicates the system continues to operate, but the system is approaching shutdown. **Note** Beware if the temperature reaches or exceeds 84C/183F, which is the HighShut value, a Shutdown message is issued, and the NPE Outlet area shuts down.

Table 4 show environment table Field Descriptions for the NPE-G2 in Cisco 7200 VXR Router

Field	Description
CPU Die 75C/167F 85C/185F	These are the HighWarn and HighCrit temperature thresholds, respectively, for the CPU Die. If the CPU Die temperature value reaches the HighWarn (75C/167F) and HighCrit (85C/185F) levels, warning and critical messages, respectively, are issued. If the value reaches 75C/167F or greater, you receive a warning message indicating HighWarn. The system continues to operate, but operator action is recommended to bring the system back to a normal state. If the value reaches 85C/185F or greater, you receive a critical (HighCrit) message instead, that indicates the system continues to operate, but the system is approaching shutdown. **Note** Beware if the temperature reaches or exceeds 100C/212F, which is the HighShut value, a Shutdown message is issued and the CPU Die area shuts down.
System shutdown for NPE Inlet is 80C/176F	This is the HighShut temperature threshold for the NPE Inlet. If the temperature reaches or exceeds 80C/176F, a Shutdown message is issued and the NPE Inlet area is shut down.
System shutdown for NPE Outlet is 84C/183F	This is the HighShut temperature threshold for the NPE Outlet. If the temperature reaches or exceeds 84C/183F, a Shutdown message is issued and the NPE Outlet area is shut down.
System shutdown for CPU Die is 100C/212F	This is the HighShut temperature threshold for the CPU Die. If the temperature reaches or exceeds 100C/212F, a Shutdown message is issued and the CPU Die area is shut down.
+3.30 V +2.30 +3.12 +3.47 +4.29	The voltage thresholds for the +3.30 V power rail are as follows: • +2.30 is the LowShut voltage threshold • +3.12 is the LowCrit voltage threshold • +3.47 is the HighCrit voltage threshold • +4.29 is the HighShut voltage threshold **Note** The LowWarn and HighWarn voltage levels are not checked and their thresholds are not displayed on the NPE-G2.

Table 4 show environment table Field Descriptions for the NPE-G2 in Cisco 7200 VXR Router

Field	Description
VDD_CPU +0.89 +1.21 +1.36 +1.71	The voltage thresholds for the VDD_CPU power rail are as follows: • +0.89 is the LowShut voltage threshold • +1.21 is the LowCrit voltage threshold • +1.36 is the HighCrit voltage threshold • +1.71 is the HighShut voltage threshold **Note** The LowWarn and HighWarn voltage levels are not checked and their thresholds are not displayed on the NPE-G2.
VDD_MEM +1.71 +2.34 +2.61 +3.28	The voltage thresholds for the VDD_MEM power rail are as follows: • +1.71 is the LowShut voltage threshold • +2.34 is the LowCrit voltage threshold • +2.61 is the HighCrit voltage threshold • +3.28 is the HighShut voltage threshold **Note** The LowWarn and HighWarn voltage levels are not checked and their thresholds are not displayed on the NPE-G2.
VTT +0.85 +1.17 +1.32 +1.64	The voltage thresholds for the VTT power rail are as follows: • +0.85 is the LowShut voltage threshold • +1.17 is the LowCrit voltage threshold • +1.32 is the HighCrit voltage threshold • +1.64 is the HighShut voltage threshold **Note** The LowWarn and HighWarn voltage levels are not checked and their thresholds are not displayed on the NPE-G2.

Cisco 7000 Series Routers

The following are examples of messages that display on the system console when a measurement has exceeded an acceptable margin:

```
ENVIRONMENTAL WARNING: Air flow appears marginal.
ENVIRONMENTAL WARNING: Internal temperature measured 41.3(C)
ENVIRONMENTAL WARNING: +5 volt testpoint measured 5.310(V)
```

The system displays the following message if voltage or temperature exceed maximum margins:

```
SHUTDOWN: air flow problem
```

In the following example, there have been two intermittent power failures since a router was turned on, and the lower power supply is not functioning. The last intermittent power failure occurred on Monday, June 10, 1996, at 11:07 p.m.

```
7000# show environment all

Environmental Statistics
  Environmental status as of 23:19:47 UTC Wed Jun 12 1996
  Data is 6 second(s) old, refresh in 54 second(s)

  WARNING: Lower Power Supply is NON-OPERATIONAL

  Lower Power Supply:700W, OFF     Upper Power Supply: 700W, ON

  Intermittent Powerfail(s): 2     Last on 23:07:05 UTC Mon Jun 10 1996

  +12 volts measured at  12.05(V)
   +5 volts measured at   4.96(V)
  -12 volts measured at -12.05(V)
  +24 volts measured at  23.80(V)

  Airflow temperature measured at 38(C)
  Inlet temperature measured at 25(C)
```

Table 5 describes the significant fields shown in the display.

Table 5 show environment all Field Descriptions for the Cisco 7000 Series Routers

Field	Description
Environmental status as of...	Date and time of last query.
Data is..., refresh in...	Environmental measurements are output into a buffer every 60 seconds, unless other higher-priority processes are running.
WARNING:	If environmental measurements are not within specification, warning messages are displayed.
Lower Power Supply	Type of power supply installed and its status (on or off).
Upper Power Supply	Type of power supply installed and its status (on or off).
Intermittent Powerfail(s)	Number of power hits (not resulting in shutdown) since the system was last booted.
voltage specifications	System voltage measurements.
Airflow and inlet temperature	Temperature of air coming in and going out.

The following example is for the Cisco 7000 series router. The router retrieves the environmental statistics at the time of the last shutdown. In this example, the last shutdown was Friday, May 19, 1995, at 12:40 p.m., so the environmental statistics at that time are displayed.

```
Router# show environment last

Environmental Statistics
  Environmental status as of 14:47:00 UTC Sun May 21 1995
  Data is 6 second(s) old, refresh in 54 second(s)

  WARNING: Upper Power Supply is NON-OPERATIONAL

LAST Environmental Statistics
  Environmental status as of 12:40:00 UTC Fri May 19 1995
```

```
  Lower Power Supply: 700W, ON     Upper Power Supply: 700W, OFF

  No Intermittent Powerfails

  +12 volts measured at  12.05(V)
   +5 volts measured at   4.98(V)
  -12 volts measured at -12.00(V)
  +24 volts measured at  23.80(V)

 Airflow temperature measured at 30(C)
  Inlet  temperature measured at 23(C)
```

Table 6 describes the significant fields shown in the display.

Table 6 show environment last Field Descriptions for the Cisco 7000 Series Routers

Field	Description
Environmental status as of...	Date and time of last query.
Data is..., refresh in...	Environmental measurements are output into a buffer every 60 seconds, unless other higher-priority processes are running.
WARNING:	If environmental measurements are not within specification, warning messages are displayed.
LAST Environmental Statistics	Displays test point values at time of the last environmental shutdown.
Lower Power Supply: Upper Power Supply:	For the Cisco 7000 router, indicates the status of the two 700W power supplies. For the Cisco 7010 router, indicates the status of the single 600W power supply.

The following example shows sample output for the current environmental status in tables that list voltage and temperature parameters. There are three warning messages: one each about the lower power supply, the airflow temperature, and the inlet temperature. In this example, voltage parameters are shown to be in the normal range, airflow temperature is at a critical level, and inlet temperature is at the warning level.

```
Router> show environment table

Environmental Statistics
  Environmental status as of Mon 11-2-1992 17:43:36
  Data is 52 second(s) old, refresh in 8 second(s)

  WARNING: Lower Power Supply is NON-OPERATIONAL
  WARNING: Airflow temperature has reached CRITICAL level at 73(C)
  WARNING: Inlet temperature has reached WARNING level at 41(C)

Voltage Parameters:

 SENSE        CRITICAL               NORMAL               CRITICAL
-------|--------------------|----------------------|--------------------

+12(V)                10.20        12.05(V)       13.80
 +5(V)                 4.74         4.98(V)        5.26
-12(V)               -10.20       -12.05(V)      -13.80
+24(V)                20.00        24.00(V)       28.00
```

```
Temperature Parameters:

 SENSE     WARNING      NORMAL      WARNING      CRITICAL      SHUTDOWN
-------|-------------|------------|-------------|--------------|-----------

Airflow            10           60            70    73(C)      88
Inlet              10           39          41(C)   46         64
```

Table 7 describes the significant fields shown in the display.

Table 7 show environment table Field Descriptions for the Cisco 7000 Series Router

Field	Description
SENSE (Voltage Parameters)	Voltage specification for a DC line.
SENSE (Temperature Parameters)	Air being measured. Inlet measures the air coming in, and Airflow measures the temperature of the air inside the chassis.
WARNING	System is approaching an out-of-tolerance condition.
NORMAL	All monitored conditions meet normal requirements.
CRITICAL	Out-of-tolerance condition exists.
SHUTDOWN	Processor has detected condition that could cause physical damage to the system.

Cisco 7200 Series Routers

The system displays the following message if the voltage or temperature enters the “Warning” range:

```
%ENVM-4-ENVWARN: Chassis outlet 3 measured at 55C/131F
```

The system displays the following message if the voltage or temperature enters the “Critical” range:

```
%ENVM-2-ENVCRIT: +3.45 V measured at +3.65 V
```

The system displays the following message if the voltage or temperature exceeds the maximum margins:

```
%ENVM-0-SHUTDOWN: Environmental Monitor initiated shutdown
```

The following message is sent to the console if a power supply has been inserted or removed from the system. This message relates only to systems that have two power supplies.

```
%ENVM-6-PSCHANGE: Power Supply 1 changed from Zytek AC Power Supply to removed
```

The following message is sent to the console if a power supply has been powered on or off. In the case of the power supply being shut off, this message can be due to the user shutting off the power supply or to a failed power supply. This message relates only to systems that have two power supplies.

```
%ENVM-6-PSLEV: Power Supply 1 state changed from normal to shutdown
```

The following is sample output from the **show environment all** command on the Cisco 7200 series router when there is a voltage warning condition in the system:

```
7200# show environment all

Power Supplies:
        Power supply 1 is unknown. Unit is off.
        Power supply 2 is Zytek AC Power Supply. Unit is on.

Temperature readings:
        chassis inlet    measured at 25C/77F
        chassis outlet 1 measured at 29C/84F
```

```
        chassis outlet 2 measured at 36C/96F
        chassis outlet 3 measured at 44C/111F
Voltage readings:
        +3.45 V measured at +3.83 V:Voltage in Warning range!
        +5.15 V measured at +5.09 V
        +12.15  measured at +12.42 V
        -11.95  measured at -12.10 V
```

Table 8 describes the significant fields shown in the display.

Table 8 show environment all Field Descriptions for the Cisco 7200 Series Router

Field	Description
Power Supplies:	Current condition of the power supplies including the type and whether the power supply is on or off.
Temperature readings:	Current measurements of the chassis temperature at the inlet and outlet locations.
Voltage readings:	Current measurement of the power supply test points.

The following example is for the Cisco 7200 series router. This example shows the measurements immediately before the last shutdown and the reason for the last shutdown (if appropriate).

```
7200# show environment last

   chassis inlet      previously measured at 27C/80F
   chassis outlet 1   previously measured at 31C/87F
   chassis outlet 2   previously measured at 37C/98F
   chassis outlet 3   previously measured at 45C/113F
   +3.3 V             previously measured at 4.02
   +5.0 V             previously measured at 4.92
   +12.0 V            previously measured at 12.65
   -12.0 V            previously measured at 11.71

last shutdown reason - power supply shutdown
```

Table 9 describes the significant fields shown in the display.

Table 9 show environment last Field Descriptions for the Cisco 7200 Series Router

Field	Description
chassis inlet	Temperature measurements at the inlet area of the chassis.
chassis outlet	Temperature measurements at the outlet areas of the chassis.
voltages	Power supply test point measurements.
last shutdown reason	Possible shutdown reasons are power supply shutdown, critical temperature, and critical voltage.

The following example is for the Cisco 7200 series router. This information lists the temperature and voltage shutdown thresholds for each sensor.

```
7200# show environment table

Sample Point      LowCritical    LowWarning     HighWarning    HighCritical
chassis inlet                                   40C/104F       50C/122F
chassis outlet 1                                43C/109F       53C/127F
chassis outlet 2                                75C/167F       75C/167F
```

```
chassis outlet 3                                    55C/131F        65C/149F
+3.45 V           +2.76          +3.10              +3.80           +4.14
+5.15 V           +4.10          +4.61              +5.67           +6.17
+12.15 V          +9.72          +10.91             +13.37          +14.60
-11.95 V          -8.37          -9.57              -14.34          -15.53
Shutdown system at 70C/158F
```

Table 10 describes the significant fields shown in the display.

Table 10 show environment table Field Descriptions for the Cisco 7200 Series Router

Field	Description
Sample Point	Area for which measurements are taken.
LowCritical	Level at which a critical message is issued for an out-of-tolerance voltage condition. The system continues to operate; however, the system is approaching shutdown.
LowWarning	Level at which a warning message is issued for an out-of-tolerance voltage condition. The system continues to operate, but operator action is recommended to bring the system back to a normal state.
HighWarning	Level at which a warning message is issued. The system continues to operate, but operator action is recommended to bring the system back to a normal state.
HighCritical	Level at which a critical message is issued. For the chassis, the router is shut down. For the power supply, the power supply is shut down.
Shutdown system at	The system is shut down if the specified temperature is met.

Cisco 7500 Series Router

The sample output for the Cisco 7500 series routers may vary depending on the specific model (for example, the Cisco 7513 router). The following is sample output from the **show environment all** command on the Cisco 7500 series router:

```
7500# show environment all

Arbiter type 1, backplane type 7513 (id 2)
Power supply #1 is 1200W AC (id 1), power supply #2 is removed (id 7)
Active fault conditions: none
Fan transfer point: 100%
Active trip points: Restart_Inhibit
15 of 15 soft shutdowns remaining before hard shutdown

                        1
               0123456789012
Dbus slots:    X     XX    X

card         inlet      hotpoint      exhaust
RSP(6)      35C/95F     47C/116F      40C/104F
RSP(7)      35C/95F     43C/109F      39C/102F

Shutdown temperature source is 'hotpoint' on RSP(6), requested RSP(6)

+12V measured at 12.31
+5V measured at 5.21
-12V measured at -12.07
+24V measured at 22.08
```

```
+2.5 reference is 2.49

PS1 +5V Current      measured at 59.61 A (capacity 200 A)
PS1 +12V Current     measured at 5.08 A (capacity 35 A)
PS1 -12V Current     measured at 0.42 A (capacity 3 A)
PS1 output is 378 W
```

Table 11 describes the significant fields shown in the display.

Table 11 show environment all Field Descriptions for the Cisco 7500 Series Routers

Field	Description
Arbiter type 1	Numbers indicating the arbiter type and backplane type.
Power supply	Number and type of power supply installed in the chassis.
Active fault conditions:	Lists any fault conditions that exist (such as power supply failure, fan failure, and temperature too high).
Fan transfer point:	Software-controlled fan speed. If the router is operating below its automatic restart temperature, the transfer point is reduced by 10 percent of the full range each minute. If the router is at or above its automatic restart temperature, the transfer point is increased in the same way.
Active trip points:	Compares temperature sensor against the values displayed at the bottom of the **show environment table** command output.
15 of 15 soft shutdowns remaining	When the temperature increases above the “board shutdown” level, a soft shutdown occurs (that is, the cards are shut down, and the power supplies, fans, and CI continue to operate). When the system cools to the restart level, the system restarts. The system counts the number of times this occurs and keeps the up/down cycle from continuing forever. When the counter reaches zero, the system performs a hard shutdown, which requires a power cycle to recover. The soft shutdown counter is reset to its maximum value after the system has been up for 6 hours.
Dbus slots:	Indicates which chassis slots are occupied.
card, inlet, hotpoint, exhaust	Temperature measurements at the inlet, hotpoint, and exhaust areas of the card. The (6) and (7) indicate the slot numbers. Dual Route Switch Processor (RSP) chassis can show two RSPs.
Shutdown temperature source	Indicates which of the three temperature sources is selected for comparison against the “shutdown” levels listed with the **show environment table** command.
Voltages (+12V, +5V, -12V, +24V, +2.5)	Voltages measured on the backplane.
PS1	Current measured on the power supply.

The following example is for the Cisco 7500 series router. This example shows the measurements immediately before the last shutdown.

```
7500# show environment last

 RSP(4) Inlet       previously measured at 37C/98F
 RSP(4) Hotpoint    previously measured at 46C/114F
```

```
RSP(4) Exhaust     previously measured at 52C/125F
+12 Voltage        previously measured at 12.26
+5 Voltage         previously measured at 5.17
-12 Voltage        previously measured at -12.03
+24 Voltage        previously measured at 23.78
```

Table 12 describes the significant fields shown in the display.

Table 12 show environment last Field Descriptions for the Cisco 7500 Series Router

Field	Description
RSP(4) Inlet, Hotpoint, Exhaust	Temperature measurements at the inlet, hotpoint, and exhaust areas of the card.
Voltages	Voltages measured on the backplane.

The following example is for the Cisco 7500 series router. This information lists the temperature and voltage thresholds for each sensor. These thresholds indicate when error messages occur. There are two level of messages: warning and critical.

```
7500# show environment table

Sample Point      LowCritical    LowWarning     HighWarning    HighCritical
RSP(4) Inlet                                    44C/111F       50C/122F
RSP(4) Hotpoint                                 54C/129F       60C/140F
RSP(4) Exhaust
+12 Voltage       10.90          11.61          12.82          13.38
+5 Voltage        4.61           4.94           5.46           5.70
-12 Voltage       -10.15         -10.76         -13.25         -13.86
+24 Voltage       20.38          21.51          26.42          27.65
2.5 Reference                    2.43           2.51
Shutdown boards at           70C/158F
Shutdown power supplies at   76C/168F
Restart after shutdown below 40C/104F
```

Table 13 describes the significant fields shown in the display.

Table 13 show environment table Field Descriptions for the Cisco 7500 Series Router

Field	Description
Sample Point	Area for which measurements are taken.
LowCritical	Level at which a critical message is issued for an out-of-tolerance voltage condition. The system continues to operate; however, the system is approaching shutdown.
LowWarning	Level at which a warning message is issued for an out-of-tolerance voltage condition. The system continues to operate, but operator action is recommended to bring the system back to a normal state.
HighWarning	Level at which a warning message is issued. The system continues to operate, but operator action is recommended to bring the system back to a normal state.
HighCritical	Level at which a critical message is issued. For the chassis, the router is shut down. For the power supply, the power supply is shut down.

Table 13 show environment table Field Descriptions for the Cisco 7500 (continued)Series

Field	Description
Shutdown boards at	The card is shut down if the specified temperature is met.
Shutdown power supplies at	The system is shut down if the specified temperature is met.
Restart after shutdown	The system will restart when the specified temperature is met.

Cisco AS5300 Series Access Servers

In the following example, keywords and options are limited according to the physical characteristics of the system is shown:

```
as5300# show environment ?

  all    All environmental monitor parameters
  last   Last environmental monitor parameters
  table  Temperature and voltage ranges
  |      Output modifiers
  <cr>

as5300# show environment table

%This option not available on this platform
```

Cisco 12000 Series GSRs

The following examples are for the Cisco 12000 series GSRs.

The following is sample output from the **show environment** command for a Cisco 12012 router. Slots 0 through 11 are the line cards, slots 16 and 17 are the clock and scheduler cards, slots 18 through 20 are the switch fabric cards, slots 24 through 26 are the power supplies, and slots 28 and 29 are the blowers. An “NA” in the table means that no values were returned. In some cases it is because the equipment is not supported for that environmental parameter (for example, the power supply and blowers in slots 24, 26, 28, and 29 do not have a 3V power supply, so an NA is displayed).

```
Router# show environment

Slot #  3V      5V      MBUS 5V Hot Sensor      Inlet Sensor
        (mv)    (mv)    (mv)     (deg C)          (deg C)
0       3300    4992    5040       42.0           37.0
2       3296    4976    5136       40.0           33.0
4       3280    4992    5120       38.5           31.5
7       3280    4984    5136       42.0           32.0
9       3292    4968    5160       39.5           31.5
11      3288    4992    5152       40.0           30.5
16      3308    NA      5056       42.5           38.0
17      3292    NA      5056       40.5           36.5
18      3304    NA      5176       36.5           35.0
19      3300    NA      5184       37.5           33.5
20      3304    NA      5168       36.5           34.0
24      NA      5536    5120       NA             31.5
26      NA      5544    5128       NA             31.5
28      NA      NA      5128       NA             NA
29      NA      NA      5104       NA             NA

Slot #  48V     AMP_48
        (Volt)  (Amp)
24      46      12
26      46      19
```

```
Slot #  Fan 0   Fan 1   Fan 2
        (RPM)   (RPM)   (RPM)
28      2160    2190    2160
29      2130    2190    2070
Router#
```

Table 14 describes the significant fields shown and lists the equipment supported by each environmental parameter. “NA” indicates that the reading could not be obtained, so the command should be run again.

Table 14 show environment Field Descriptions for the Cisco 12000 Series Routers

Field	Description
Slot #	Slot number of the equipment. On the Cisco 12012 router, slots 0 through 11 are the line cards, slots 16 and 17 are the clock and scheduler cards, slots 18 through 20 are the switch fabric cards, slots 24 through 27 are the power supplies, and slots 28 and 29 are the blowers.
3V (mv)	Measures the 3V power supply on the card. The 3V power supply is on the line cards, GRP card, clock and scheduler cards, and switch fabric cards.
5V (mv)	Measures the 5V power supply on the card. The 5V power supply is on the line cards, GRP card, and power supplies.
MBUS 5V (mv)	Measures the 5V MBus on the card. The 5V MBus is on all equipment.
Hot Sensor (deg C)	Measures the temperature at the hot sensor on the card. The hot sensor is on the line cards, GRP card, clock and scheduler cards, switch fabric cards, and blowers.
Inlet Sensor (deg C)	Measures the current inlet temperature on the card. The inlet sensor is on the line cards, GRP card, clock and scheduler cards, switch fabric cards, and power supplies.
48V (Volt)	Measures the DC power supplies.
AMP_48 (Amp)	Measures the AC power supplies.
Fan 0, Fan 1, Fan 2	Measures the fan speed in rotations per minute.

The following is sample output from the **show environment all** command for the Cisco 12008 router. Slots 0 through 7 are the line cards, slots 16 and 17 are the clock scheduler cards (the clock scheduler cards control the fans), slots 18 through 20 are the switch fabric cards, and slots 24 and 26 are the power supplies. The Cisco 12008 router does not support slots 25, 27, 28, and 29. An “NA” in the table means that no values were returned. In some cases it is because the equipment is not supported for that environmental parameter (for example, the power supplies in slots 24 and 26 do not have a hot sensor, so an NA is displayed).

```
Router# show environment all

Slot #  Hot Sensor      Inlet Sensor
          (deg C)         (deg C)
2           31.0            22.0
5           33.5            26.5
16          25.5            21.5
18          22.0            21.0
19          22.5            21.0
24          NA              29.5
26          NA              24.5
```

```
Slot #  3V      5V      MBUS 5V
        (mv)    (mv)    (mv)
2       3292    5008    5136
5       3292    5000    5128
16      3272    NA      5128
18      3300    NA      5128
19      3316    NA      5128

Slot #  5V      MBUS 5V 48V     AMP_48
        (mv)    (mv)    (Volt)  (Amp)
24      0       5096    3       0
26      5544    5144    47      3

Slot #  Fan Information
16      Voltage 16V Speed slow: Main Fans Ok Power Supply fans Ok

Alarm Indicators
No alarms

Slot #  Card Specific Leds
16      Mbus OK SFCs Failed
18      Mbus OK
19      Mbus OK
24      Input Failed
26      Input Ok
```

The following is sample output from the **show environment table** command for a Cisco 12012 router. The **show environment table** command lists the warning, critical, and shutdown limits on your system and includes the GRP card and line cards (slots 0 to 15), clock and scheduler cards (slots 16 and 17), switch fabric cards (slots 18 to 20), and blowers.

```
Router# show environment table

Hot Sensor Temperature Limits (deg C):
                        Warning Critical Shutdown
GRP/GLC (Slots 0-15)       40      46      57
CSC     (Slots 16-17)      46      51      65
SFC     (Slots 18-20)      41      46      60

Inlet Sensor Temperature Limits (deg C):
                        Warning Critical Shutdown
GRP/GLC (Slots 0-15)       35      40      52
CSC     (Slots 16-17)      40      45      59
SFC     (Slots 18-20)      37      42      54

3V Ranges (mv):
                           Warning         Critical        Shutdown
                        Below   Above   Below  Above    Below  Above
GRP/GLC (Slots 0-15)     3200    3400    3100   3500     3050   3550
CSC     (Slots 16-17)    3200    3400    3100   3500     3050   3550
SFC     (Slots 18-20)    3200    3400    3100   3500     3050   3550

5V Ranges (mv):
                           Warning         Critical        Shutdown
                        Below   Above   Below  Above    Below  Above
GRP/GLC (Slots 0-15)     4850    5150    4750   5250     4680   5320

MBUS_5V Ranges (mv):
                           Warning         Critical        Shutdown
                        Below   Above   Below  Above    Below  Above
GRP/GLC (Slots 0-15)     5000    5250    4900   5350     4750   5450
CSC     (Slots 16-17)    4820    5150    4720   5250     4750   5450
SFC     (Slots 17-20)    5000    5250    4900   5350     4750   5450
```

```
Blower Operational Range (RPM):

Top Blower:
                Warning    Critical
                 Below      Below
Fan 0           1000        750
Fan 1           1000        750
Fan 2           1000        750

Bottom Blower:
                Warning    Critical
                 Below      Below
Fan 0           1000        750
Fan 1           1000        750
Fan 2           1000        750
```

The following is sample output from the **show environment leds** command for a Cisco 12012 router. The **show environment leds** command lists the status of the MBus LEDs on the clock, scheduler, and the switch fabric cards.

```
Router# show environment leds

16 leds Mbus OK
18 leds Mbus OK
19 leds Mbus OK
20 leds Mbus OK
```

Cisco 7304 Router

The following is sample output from the **show environment all** command on a Cisco 7304 router with modular services cards (MSCs) and shared port adapters (SPAs) installed:

```
Router# show environment all

Power Supplies:
        Power supply 1 is AC power supply. Unit is on.
        Power supply 2 is empty.
Fans:
        Fan 1 is on.
        Fan 2 is on.
Temperature readings:
  Active RP (NPEG100, slot 0):
        npeg100 outlet       measured at 29C/84F
        npeg100 inlet        measured at 34C/93F
        npeg100 hotspot      measured at 35C/95F
  Line card (7304-MSC-100, slot 4):
        7304-MSC-100         measured at 32C/89F
  Card in subslot 4/0:
        SPA-4FE-7304 inlet   measured at 31C/87F
        SPA-4FE-7304 outlet  measured at 32C/89F
Voltage readings:
  Active RP (NPEG100, slot 0):
        npe outlet  2.5  V   measured at  2.496 V
        npe outlet  3.3  V   measured at  3.302 V
        npe outlet  5.0  V   measured at  4.992 V
        npe outlet 12.0  V   measured at 11.812 V
        npe outlet  3.3c V   measured at  3.199 V
        npe inlet   1.5  V   measured at  1.494 V
        npe outlet  1.8  V   measured at  1.790 V
        npe outlet  1.2  V   measured at  1.198 V
        npe outlet  1.2c V   measured at  1.198 V
```

```
  Line card (7304-MSC-100, slot 4):
        7304-MSC-100 0.75 V  measured at  0.733 V
        7304-MSC-100 1.5 V   measured at  1.494 V
        7304-MSC-100 2.5 V   measured at  2.483 V
        7304-MSC-100 3.3 V   measured at  3.250 V
        7304-MSC-100 12 V    measured at 11.937 V
  Card in subslot 4/0:
        SPA-4FE-7304 1.8V    measured at  1.802 V
        SPA-4FE-7304 1.5V    measured at  1.503 V
        SPA-4FE-7304 2.5V    measured at  2.474 V
        SPA-4FE-7304 3.3V    measured at  3.252 V
        SPA-4FE-7304 1.0V    measured at  1.015 V
Envm stats saved 13 time(s) since reload
```

The following is sample output from the **show environment last** command on a Cisco 7304 router with MSCs and SPAs installed and an NSE-100:

```
Router# show environment last

Temperature information:
  NSE board:
        nse outlet           is unmeasured
        nse inlet            is unmeasured
        nse hotspot          is unmeasured
        nse db               is unmeasured
  Line card slot 4:
        7304-MSC-100         is unmeasured
  Card in subslot 4/1:
        SPA-4FE-7304 inlet   previously measured at 30C/86F
        SPA-4FE-7304 outlet  previously measured at 32C/89F
Voltage information:
  NSE board:
        nse outlet 1.8 V     is unmeasured
        nse outlet 2.5 V     is unmeasured
        nse outlet 3.3 V     is unmeasured
        nse outlet 5 V       is unmeasured
        nse outlet 12 V      is unmeasured
        nse inlet 1.8 V      is unmeasured
        nse inlet 3.3 V      is unmeasured
        nse inlet 1.5 V      is unmeasured
        nse hotspot 1.8 V    is unmeasured
        nse db 1.65 V        is unmeasured
        nse db 1.8 V         is unmeasured
  Line card slot 4:
        7304-MSC-100 0.75 V  is unmeasured
        7304-MSC-100 1.5 V   is unmeasured
        7304-MSC-100 2.5 V   is unmeasured
        7304-MSC-100 3.3 V   is unmeasured
        7304-MSC-100 12 V    is unmeasured
  Card in subslot 4/1:
        SPA-4FE-7304 1.8V    previously measured at  1.823 V
        SPA-4FE-7304 1.5V    previously measured at  1.512 V
        SPA-4FE-7304 2.5V    previously measured at  2.504 V
        SPA-4FE-7304 3.3V    previously measured at  3.258 V
        SPA-4FE-7304 1.0V    previously measured at  1.014 V
Last shutdown reason: shutdown undefined
```

The following is sample output from the **show environment table** command on a Cisco 7304 router with MSCs and SPAs installed:

```
Router# show environment table

Temperature tables:
  Active RP (NPEG100, slot 0):
        Sample Point        HighWarning     HighCritical HighShutdown
        npeg100 outlet      53C/127F        68C/154F        73C/163F
        npeg100 inlet       53C/127F        68C/154F        73C/163F
        npeg100 hotspot     53C/127F        68C/154F        73C/163F
  Line card (7304-MSC-100, slot 4):
        Sample Point        HighWarning     HighCritical HighShutdown
        7304-MSC-100        48C/118F        63C/145F        68C/154F
  Card in subslot 4/0:
        Sample Point        HighWarning     HighCritical HighShutdown
        SPA-4FE-7304 inlet  52C/125F        67C/152F        72C/161F
        SPA-4FE-7304 outlet 52C/125F        67C/152F        72C/161F
Voltage tables:
  Active RP (NPEG100, slot 0):
        Sample Point       LowShut  LowCrit  LowWarn  HighWarn HighCrit HighShut
        npe outlet  2.5  V 2.275 V  2.375 V  2.400 V  2.600 V  2.625 V  2.725 V
        npe outlet  3.3  V 3.003 V  3.135 V  3.185 V  3.415 V  3.465 V  3.597 V
        npe outlet  5.0  V 4.500 V  4.750 V  4.800 V  5.200 V  5.250 V  5.500 V
        npe outlet 12.0  V 9.960 V 10.440 V 10.800 V 13.200 V 13.560 V 14.040 V
        npe outlet  3.3c V 3.003 V  3.135 V  3.185 V  3.415 V  3.465 V  3.597 V
        npe inlet   1.5  V 1.350 V  1.425 V  1.455 V  1.545 V  1.575 V  1.650 V
        npe outlet  1.8  V 1.620 V  1.710 V  1.728 V  1.872 V  1.890 V  1.980 V
        npe outlet  1.2  V 1.128 V  1.164 V  1.167 V  1.233 V  1.236 V  1.272 V
        npe outlet  1.2c V 1.128 V  1.164 V  1.167 V  1.233 V  1.236 V  1.272 V
  Line card (7304-MSC-100, slot 4):
        Sample Point       LowShut  LowCrit  LowWarn  HighWarn HighCrit HighShut
        7304-MSC-100 0.75  0.559 V  0.600 V  0.600 V  0.900 V  0.900 V  0.941 V
        7304-MSC-100 1.5 V 1.350 V  1.440 V  1.455 V  1.545 V  1.560 V  1.650 V
        7304-MSC-100 2.5 V 2.250 V  2.375 V  2.400 V  2.600 V  2.625 V  2.750 V
        7304-MSC-100 3.3 V 2.970 V  3.135 V  3.168 V  3.432 V  3.465 V  3.630 V
        7304-MSC-100 12 V  9.960 V 10.440 V 10.800 V 13.200 V 13.560 V 14.040 V
  Card in subslot 4/0:
        Sample Point       LowShut  LowCrit  LowWarn  HighWarn HighCrit HighShut
        SPA-4FE-7304 1.8V  1.620 V  1.710 V  1.728 V  1.872 V  1.890 V  1.980 V
        SPA-4FE-7304 1.5V  1.350 V  1.425 V  1.440 V  1.560 V  1.575 V  1.650 V
        SPA-4FE-7304 2.5V  2.250 V  2.375 V  2.400 V  2.600 V  2.625 V  2.750 V
        SPA-4FE-7304 3.3V  2.970 V  3.135 V  3.168 V  3.432 V  3.465 V  3.630 V
        SPA-4FE-7304 1.0V  0.900 V  0.950 V  0.960 V  1.040 V  1.050 V  1.100 V
```

Table 15 describes the significant fields show in the display.

Table 15 show environment table Field Descriptions for the Cisco 7304 Router

Field	Description
Sample Point	Area for which measurements are taken.
LowShut	Lowest level for an out-of-tolerance condition at which the system shuts itself down. For out-of-tolerance conditions with SPA environment variables, only the SPA is shut down.
LowCrit/LowCritical	Level at which a critical message is issued for an out-of-tolerance voltage condition. The system continues to operate; however, the system is approaching shutdown.

Table 15 show environment table Field Descriptions for the Cisco 7304 Router (continued)

Field	Description
LowWarn/LowWarning	Level at which a warning message is issued for an out-of-tolerance voltage condition. The system continues to operate, but operator action is recommended to bring the system back to a normal state.
HighWarn/HighWarning	Level at which a warning message is issued for an out-of-tolerance voltage condition. The system continues to operate, but operator action is recommended to bring the system back to a normal state.
HighCrit/HighCritical	Level at which a critical message is issued for an out-of-tolerance voltage condition. The system continues to operate; however, the system is approaching shutdown.
HighShut/HighShutdown	Highest level for an out-of-tolerance condition at which the system shuts itself down. For out-of-tolerance conditions with SPA environment variables, only the SPA is shut down.

Related Commands

Command	Description
snmp-server enable traps envmon	Controls (enables or disables) environmental monitoring SNMP notifications.
snmp-server host	Specifies how SNMP notifications should be sent (as traps or informs), the version of SNMP to use, the security level of the notifications (for SNMPv3), and the recipient (host) of the notifications.

Feature Information for NPE-G2 Support for the show environment Command

Table 16 lists the release history for this feature.

Not all commands may be available in your Cisco IOS software release. For release information about a specific command, see the command reference documentation.

Use Cisco Feature Navigator to find information about platform support and software image support. Cisco Feature Navigator enables you to determine which Cisco IOS and Catalyst OS software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to http://www.cisco.com/go/cfn. An account on Cisco.com is not required.

Note Table 16 lists only the Cisco IOS software release that introduced support for a given feature in a given Cisco IOS software release train. Unless noted otherwise, subsequent releases of that Cisco IOS software release train also support that feature.

Table 16 Feature Information for NPE-G2 Support for the show environment Command

Feature Name	Releases	Feature Information
NPE-G2 Support for the **show environment** Command	12.4(4)XD	The output of the **show environment** command has been modified to support the NPE-G2 network processing engine. This feature was introduced on the Cisco 7200 VXR NPE-G2 in Cisco IOS Release12.4(4)XD.